

JOB OFFER: PhD position - ERC project

“Deciphering fungal cell wall carbohydrate oxidation and its biological functions”

INRAE



The National Research Institute for Agriculture, Food and the Environment (INRAE) is a French public research institution bringing together a workforce of 12,000 people, with more than 270 research, support, and experimental units located across 18

centres throughout France.

INRAE is positioned among the world leaders in agricultural and food sciences, plant and animal sciences, and environmental ecology. Its research aims to develop solutions for high-performing and sustainable agriculture, high-quality food systems, and the sustainable management of natural resources and ecosystems.

The PhD position

You will carry out your work within the joint research unit INRAE – Aix-Marseille University, *Fungal Biodiversity and Biotechnology* (BBF; <https://www.bbf-lab.fr/>), located on the Luminy science campus in Marseille, France.



European Research Council
Established by the European Commission

This PhD position is fully funded by an European Research Council (ERC) Consolidator Grant (CoG) project: **FOX** (Principal Investigator: Dr. [Bastien Bissaro](#)).

The PhD thesis will be co-directed by Dr. Bastien Bissaro and Prof. Mickael Lafond, and co-supervised by Dr. Joyce Álvarez-Barragán (INRAE, Bordeaux). The project will benefit from a highly interdisciplinary and international network of collaborators.

Research Project

Fungal cell walls (FCWs) form the essential interface between fungal cells and their environment. They are highly dynamic carbohydrate-based structures that enable fungi to adapt to diverse lifestyles, including symbiosis, pathogenicity, and organic matter decomposition. Despite their importance, the extent, mechanisms, and biological roles of fungal cell wall (FCW) modifications remain largely unknown. The ERC FOX project is based on the hypothesis that fungi use carbohydrate oxidases to selectively cleave and/or functionalize FCW polysaccharides, thereby modulating their physico-chemical properties to support diverse biological functions.

The PhD project will contribute to uncovering the diversity and roles of these FCW-active enzymes.

Main objectives of the PhD thesis include:

- Characterization of pre-identified FCW-active carbohydrate oxidases in a model filamentous fungus.
- Functional analysis of CarbOx in fungal physiology and cell wall remodelling.

Candidate Profile

We are looking for a highly motivated, and curiosity-driven, candidate with:

- Master's degree in Microbiology, Biochemistry or related field
- Strong interest in fungal biology, enzymology, or carbohydrate chemistry
- Hands on experience in at least one of the following: microbiology or enzymology
- Knowledge of carbohydrate-active enzymes is an advantage
- Interest in interdisciplinary research combining wet lab and computational approaches
- Good communication skills and ability to work in an international environment
- Proficiency in English (written and spoken)

✦ Your quality of life at INRAE

By joining INRAE, you may benefit depending on your contract type from:

Up to 30 days of annual leave + 15 RTT days per year (for full-time staff)

Parenting support: childcare CESU vouchers, leisure benefits

Skills development schemes: training, career guidance and professional orientation support

Social support services: counselling, listening services, financial aid and loans

Holiday and leisure benefits: holiday vouchers, discounted accommodation options

TERMS OF APPOINTMENT

📍 Location: **UMR 1163**
Biodiversité et Biotechnologie Fongiques
INRAE/AMU, Faculté des Sciences de Luminy,
Marseille, France

Contract type: **Fixed-term contract (CDD)**

📅 Contrat duration : **36 months**

🕒 Start date : **between 01/10/26 and 01/11/26**

Salary: **ca. 2300 € gross per month**

HOW TO APPLY ?

- 🎓 Applicants should submit:
- Curriculum Vitae
 - Cover letter describing research interests and motivation
 - Master's transcript (if available)

➡ Applications should be sent, by e-mail to:
bastien.bissaro@inrae.fr

With the following email object:
ERC FOX project – PhD position application

✖ Application deadline : 30th June 2026

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